

Assist astronomers' new hunt for Earth-like planets

June 21 2017

Last year an international team of astronomers led by Dr Guillem Anglada-Escudé, of Queen Mary University of London (QMUL), discovered a planet around the closest star to our Sun, Proxima Centauri. Details of the observing campaign were made publicly available via the innovative [Pale Red Dot campaign](#).

The team are now resuming their search for Earth-like [planets](#) around nearby stars and are today launching another initiative to bring the public into direct touch with the research as it happens.

The Red Dots [campaign](#) will follow the astronomers as they look for planets around some of our nearest stellar neighbours. The target stars this time are Proxima Centauri (which the scientists suspect may have at least one more terrestrial planet in orbit around it), Barnard's Star, a [red dwarf star](#) just six light-years away and Ross 154, another red dwarf at a distance of nearly 10 light-years.

Dr Guillem Anglada-Escudé said: "Exploration of the nearest [stars](#) for terrestrial planets is intrinsically exciting. We want to capitalise on that to expose the way we work in science, to show the difference between data and interpretation, and to invite people to participate in the painful process of learning something new over the course of nearly 100 days of data collection. We also expect to get feedback and the help of inquisitive minds attempting innovative approaches. This is also an experiment after all. We'll see what happens!"

The team will acquire and analyse data from the High Accuracy Radial velocity Planet Searcher (HARPS) instrument on the European Southern Observatory's 3.6-metre telescope in Chile and other instruments across the globe over approximately 90 nights. Photometric observations began on 15 June and spectrographic observations start on 21 June. The Red Dots initiative—presenting real science in real time—will give the public and the scientific community direct access to the observational data from at least Proxima Centauri as the campaign unfolds.

Conversations with the scientists will be encouraged via a [forum](#) where more scientific and technical details can be shared. In addition to this, the team will welcome contributions from professional and amateur astronomers to assist in the photometric follow up of all three targets in collaboration with the American Association of Variable Star Observers.

The Red Dots campaign will keep the public informed via the [reddots.space](#) website and forum where weekly updates will be posted, together with supporting articles and featuring the highlights of the week from the community. Conversations will take place also on the [Red Dots Facebook](#) page, the [Red Dots Twitter](#) account and via the hashtag [#reddots](#).

Provided by Queen Mary, University of London

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